

Background: Nutritional knowledge is one way to achieve proper and balanced nutrition in whole life. Since pregnant women are vulnerable groups of community, nutrition in this period plays significant role in maternal and infant health. As mothers get most of their information from health centers and the knowledge of the staff in health centers on nutrition during pregnancy is necessary for proper education, in this study, nutritional knowledge of health care staff was investigated in Ajabshir and Bonab city.

Methods: In this study, sixty staff randomly selected from health care centers in Ajabshir and Bonab cities. In order to assess the knowledge on nutrition during pregnancy, staff completed a questionnaire containing 10 questions. For evaluation, the questionnaire was adjusted based on 20 scores and subjects were divided into three groups with poor, average and good knowledge based on the scores on the questionnaire. SPSS software program was applied for data analyzing.

Results: The results showed that in Ajabshir city, 6% of staff had good knowledge on nutrition during pregnancy, 27% had moderate knowledge and awareness of 67% was poor. In Bonab city, 6% of staff had good knowledge on nutrition during pregnancy, 24% had moderate knowledge and awareness of 70% was poor.

Conclusions: According to the results, most of the health care staff had poor knowledge on nutrition during pregnancy. Given the importance of nutrition in pregnancy and the need for proper education to mothers, training courses for health care workers is essential in this regard.

Keywords: Knowledge, pregnancy, health care staff, West Azarbaijan

Effects of coenzyme Q10 supplementation on liver enzymes and lipid profiles in patients with nonalcoholic fatty liver disease

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Background: Non-alcoholic fatty liver disease (NAFLD) is the most common type of liver disease, as a health problem across the world is caused by an abnormal accumulation of TG in the liver. Oxidative stress has been implicated in the pathogenesis of NAFLD. Antioxidant therapy could potentially protect cellular damage and protect cells against oxidative stress and improvement of metabolic disorders. This study was designed to investigate the effects of coenzyme Q10 (CoQ10) on liver enzymes levels and serum lipid profiles in patients with NAFLD.

Methods: This double-blind randomized placebo-controlled clinical trial was conducted in 41 patients with NAFLD. The subjects were randomly allocated into 2 groups of intervention who received 100 mg/day CoQ10 and the placebo for four weeks. Biochemical parameters including lipid profiles and liver enzymes were assessed at baseline and end of study.

Results: Serum aspartate aminotransferase (AST) concentrations significantly decreased after CoQ10 supplementation ($P < 0.05$). No significant change in lipid profile was observed.

Conclusions: CoQ10 supplements at a dose of 100 mg by the generation of metabolic energy as an essential co-factor is able to improve liver function in NAFLD. Further trials with higher dose of CoQ10 supplements and longer treatment periods are warranted.

Keywords: Non alcoholic fatty liver disease (NAFLD), Coenzyme Q10, lipid profile, liver enzymes.

The effect of milled flaxseed on glycemic indexes in pre-diabetic patients: A randomized controlled clinical trial

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Background: Cardiovascular complications of diabetes starts at the early stages of this disease, called prediabetes, and designing effective and early interventions at this stage can prevent progression of pre-diabetes to diabetes. Few studies have shown the effect of flaxseed on glycemic control. This study aimed to assess the effect of milled flaxseed on glycemic indexes in pre-diabetic patients.

Method: In this 12-week randomized clinical trial, 92 subjects with pre-diabetes were randomly allocated to 3 groups: two groups received 40 g (HD) and 20 g (LD) flaxseed daily, and the third group was the control (C). Participants on intervention groups instructed to consume flaxseed in exchange of same amount of carbohydrate and fat in daily diet. Anthropometric and laboratory evaluation are performed both before and after intervention in three groups. Insulin resistance, beta cell function, and insulin sensitivity were calculated by HOMA calculator software.

Results: FSG was significantly decreased in all three groups at the end of the study, compared to the baseline; but there were no significant changes between the means of the three groups. In this study, no significant difference was observed in insulin concentration among the studied groups compared to the baseline, neither between the studied groups. Although daily intake of 20 g flaxseed in LD group showed a significant decrease in terms of insulin resistance, this difference was not significant between the three groups. Beta cell function increased compared to the baseline; this increase was only significant in C and HD groups. However, mean changes of beta cell function did not show any significant difference between the groups. Comparison of insulin sensitivity rate before and after the intervention demonstrated a significant increase in insulin sensitivity only in LD group. This difference was not significant in other groups before and after the intervention and also between the groups.

Conclusion: Flaxseed did not improve glycemic control in patients with prediabetes and recommending flaxseed as a dietary component for pre-diabetic patients requires further studies.

Keywords: prediabetes, insulin resistance, flaxseed

The effect of lemon balm supplementation on blood glucose and lipid profile in patients with hyperlipidemia

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Background: Nowadays the using of medicinal herbs is interested by researchers for treatment of diseases. In this study the effect of lemon balm supplementation on blood glucose and lipid profile was examined in patients with hyperlipidemia.

Methods: 58 healthy man & woman with high serum cholesterol participated in this randomized clinical trial study with in two months interval. Patients were randomly divided into two groups: Placebo (PG) and supplemented (SG). SG group were supplemented with 6 capsules (0.5 gr lemon balm pow-

der in each capsules) and PG group received 6 placebo capsules each day. Fasting blood sugar (FBS), cholesterol and triglyceride were measured before and after within two month intervention.

Results: Mean of LDL-c in SG before and after supplementation decreased significantly ($P=0.002$), the mean of LDL-c between two groups did too ($P=0.02$). Also the results shows a noticeable decline in level of Cholesterol in two groups in the beginning and the end of trial but this reduction in SG ($P=0.000$) was so powerful than PG ($P=0.03$). Mean of FBS & HDL decrease significantly in both groups ($P=0.005$) but no significant differences between groups observed after the study. Moreover were not found significant disparity in level of Triglyceride in two groups. Nonetheless results present this herb prevent remarkably from increasing the level of LDL/HDL in SG group.

Conclusion: This study indicates that powder of lemon balm supplementation as a high source of antioxidants & bioactive compounds can be effective on lowering level of cholesterol & LDL in patients with hyperlipidemia.

Keywords: Melissas, Blood Glucose, Cholesterol, Triglycerides

The relationship of dairy products intake with menstrual cycle and bleeding period in Ahvaz Jundishapur University of Medical Sciences student girls

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Background: Menstruation is an important process for women's reproductive health and abnormal menstruation has adverse effects on overall health. Food intake is assumed as an index of lifestyle that could affect on many aspects of life. It has been shown adequate milk and dairy products intake have potential health effect during pregnancy and lactation. According to this fact that normal menstruation has considerable effects on pregnancy, we decided to investigate the relationship between milk and dairy products intake with length of menstrual cycle and bleeding period in university student girls.

Methods: One hundred student girls from Ahvaz Jundishapur University of Medical Sciences completed the consent form to participate in this research. General information, length of menstrual cycle and bleeding period were asked from all participants. Milk and other dairy products (yoghurt, ice cream, cheese and dough [Iranian traditional beverage]) daily serving consumption were asked from all students too.

Results: The mean \pm SD of total daily milk and dairy products intake were 2.57 ± 1.65 . The length of menstrual cycle and bleeding period were 27.56 ± 3.47 and 6.42 ± 1.47 days respectively. Milk intake showed positive relationship with length of menstrual cycle ($P=0.012$, $r=0.270$). Bleeding period revealed significant positive relationship with dough consumption ($P<0.001$, $r=0.414$) but this association was negative with cheese consumption ($P=0.025$, $r=-0.241$).

Conclusion: We could consider that milk and cheese consumption have benefit effects on menstruation. According to positive relationship of dough intake with bleeding period, we need more research to find the causing effect.

Comparative measurement of ghrelin, leptin, adiponectin, EGF and IGF-1 in breast milk of mothers with overweight/obese and normal-weight infants

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Background: Obese infants are more susceptible to develop adulthood obesity and its related co-morbidities. Previous studies have shown the presence of hormones and growth factors in maternal breast milk that may influence infant adiposity. The aim of this study was to investigate differences in concentrations of 3 hormones and 2 growth factors in the breast milk of mothers with obese and non-obese infants.

Methods: In this cross-sectional study 40 mothers with overweight or obese infants (weight for length percentile >97) and 40 age-matched mothers with normal weight infant (<100.05).

Results: There was also a significant positive correlation between EGF and ghrelin in both groups.

Conclusion: This study revealed that there was a correlation between ghrelin and EGF level in breast milk of mothers with obese and non-obese infants suggesting a possible regulatory effect of these two hormones on weight in infants.

Keywords: Infant's obesity, Breast milk feeding, Hormones, Growth factor

The effect of quercetin on plasma oxidative status, c-reactive protein and blood pressure in women with rheumatoid arthritis

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Background: Considering the increased production of free radicals and inflammatory factors in rheumatoid arthritis (RA) and the effects of bioflavonoid quercetin on reducing oxidative stress, inflammation and blood pressure, the present study examined the effects of bioflavonoid quercetin on total antioxidant capacity (TAC) of plasma, lipid peroxidation and blood pressure in women with RA.

Methods: The current study was a randomized doubleblind clinical trial in which 51 women with RA aged 19-70 years, were participated. Patients were assigned into quercetin (500 mg/day) or placebo groups for 8 weeks. Dietary intake was recorded using 24h dietary recall questionnaire and the physical activity was assessed through an international short questionnaire of physical activity at the beginning and end of the study. Plasma TAC and malondialdehyde (MDA) using colorimetric method, oxidized low density lipoprotein (oxLDL) and high sensitivity c-reactive protein (hsCRP) using enzymelinked immunosorbent assay method and also blood pressure were measured at the beginning and end of intervention.

Results: After 8 weeks there were no significant differences in TAC of plasma, oxLDL, MDA, hsCRP, systolic and diastolic blood pressure between quercetin and placebo groups and in each group comparing before and after.

Conclusion: In this study, quercetin had no effect on oxidative and inflammatory status of plasma and blood pressure in patients with RA. Further studies are needed to ensure the effect of quercetin on oxidative stress and inflammation in human.

Keywords: Blood pressure, lipid peroxidation, quercetin, rheumatoid arthritis, total antioxidant capacity

Investigation the relationship between serum 25 (OH) D and the risk of breast cancer

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Background: Some evidence suggests a relationship be-